



Singapore Welding Society

JUNE 2026

WELDPOINT



HIGHLIGHTS



President's Message

3



44th Asian Welding Federation (AWF) Meetings in Hanoi, Vietnam

24



Singapore Welding Society Holds its 48th Annual General Meeting

26



SINGAPORE WELDING SOCIETY

MORE INSIDE >

- 3** President's Message
- 15** Rethinking Gas Safety in Welding:
Lessons Every Welding Professional
Must Know
- 18** Gas-tight welding of Aluminum Parts
- 24** 44th Asian Welding Federation (AWF)
Meetings in Hanoi, Vietnam
- 26** Singapore Welding Society Holds its
48th Annual General Meeting
- 28** SWS Members' Night 2026:
Celebrating Fellowship, Recognition
and a Touch of Magic

WELDPOINT TEAM

EDITORIAL COMMITTEE

Professor Pang Hock Lye John
Dr Sun Zheng
Mr Perianan Radhakrishnan
Mr Lim Zhi Yang
Mr Ong Beng Tiong
Mr Aaron Tan

For general enquiries, please contact us at:

SINGAPORE WELDING SOCIETY

18 Boon Lay Way
#08-112 Tradehub 21
Singapore 609966
Tel: +65 6816 2644
Email: secretariat@sws.org.sg

SWS Newsletter is published by the

SINGAPORE WELDING SOCIETY.

No reproduction of this newsletter is allowed
without prior written consent of SWS.

Views expressed on this newsletter do not
necessarily reflect that of the organisation.

SWS Newsletter is now available online

WWW.SWS.ORG.SG





PRESIDENT'S MESSAGE

1.0 Introduction

Greetings to all SWS members and welcome to the 48th Annual General Meeting (AGM) of the Singapore Welding Society on 29th May 2026, 6.00pm, at Civil Service Club, Level 2, Hilltop Garden Restaurant. On behalf of the SWS Council,

I am glad to present the President's Report. Below is a summary of the SWS Office Bearers and Committees during the 2025/2026 term of office and the activities and events conducted during the year.

2.0 SWS Council Members of Year 2025/2026

Name	Position
Prof Pang Hock Lye John	President Chairman, Standardization Committee Vice-Chairman, OTR Committee
Dr Sun Zheng	Immediate Past President Chairman, International Affairs Committee
Mr Hooi Yu Koh	Vice President Assistant Honorary Treasurer
Mr Lim Zhiyang	Vice President
Mr Yusoof Aynuddin	Honorary Secretary Chairman, Technical Talks Committee
Mr Subbiah Krishnan	Honorary Treasurer
Mr Simon Wong Man Ming	Chairman, IT Committee
Mr Sze Thiam Siong	Past President Chairman, Education & Training Committee Chairman, OTR Committee
Mr Perianan Radhakrishnan	Past President Chairman, Certification & Common Welder Qualification Scheme (CWQS) Committee
Mr Ong Beng Tiong	Chairman, Publications Committee
Mr Bong Khong Lee	Chairman, Welding Technology Committee
Mr Suggu Ravi Chandra Reddy	Chairman, Membership Committee
Mr Khoo Kok Leong	Vice Chairman, Certification & Common Welder Qualification Scheme (CWQS) Committee
Mr William Chong Jun Hua	Vice Chairman, Education & Training Committee
Mr Goh Chon Min	Vice-Chairman, Welding Technology Committee

SWS Secretariat: Ms Einette Law

3.0 Finance

Honorary Treasurer:

Mr Subbiah Krishnan

Assistant Honorary Treasurer:

Mr Hooi Yu Koh

The total revenue for FY2025 was S\$279,103 as compared to S\$455,241 for FY2024. The difference in revenue is mainly attributed to the decrease in dividend income compensated by the increase in income from the Certified Welders Qualification Scheme (CWQS), course fees and exam fees. Apart from CWQS, course fees and exam fees, the revenue in FY2025 was mostly derived from membership fee, interest income and gain on investment.

The total expenses for FY2025 were S\$193,181 as compared to S\$182,802 for FY2024. The difference in expenses is mainly attributed to the increase in travelling and transportation expenses compensated by the decrease in meeting and event expenses. Apart from such expenses, the other expenses in FY2025 are mostly on professional & membership fees, staff costs, depreciation and subscription and license fees.

Our cash and cash equivalents for FY2025 are S\$2,493,536 which is S\$256,622 more as compared to S\$2,236,914 in FY2024. The healthy cash position maintained over the past year was the result of our efforts to manage SWS finances effectively and in a sustainable manner.

4.0 Education & Training Committee

Chairman:

Mr Sze Thiam Siong

Vice Chairman:

Mr William Chong Jun Hua

Welding plays a critical role across key industrial sectors such as aerospace, construction, energy, shipbuilding, oil and gas, manufacturing, transportation and infrastructure development. The integrity, safety, and reliability of welded structures depend heavily on the competence of welding personnel. In this context, welding education and training provided by Singapore Welding Society (SWS) is of paramount importance in ensuring consistent quality, safety, and sustainability across the industry.

A welding society serves as a central body for developing and delivering structured education and training programs aligned with internationally recognized standards and best practices. Through formal courses, certification schemes, and practical training, SWS helps ensure that welders, inspectors, and engineers possess the necessary technical competence to perform their duties safely and effectively. This standardization of skills reduces variability in workmanship, minimizes defects, and enhances overall confidence in welded products and structures.

Improper welding can lead to catastrophic failures, posing serious safety risks to people, assets, and the environment. SWS emphasizes safety awareness, proper procedures, and compliance with codes and standards. The training programs often incorporate applicable standards such as ISO, ASME, AWS, or EN requirements, ensuring that industry practitioners understand not only how to inspect, but

also why specific controls and procedures are essential. This plays a crucial role in supporting industry compliance and reducing incidents related to welding failures.

Welding technologies continue to evolve with developments such as automation, robotics, laser welding, advanced materials and novel inspection methods. SWS provides continuous professional development (CPD) programs that expose industry professionals to these advancements. By doing so, they help bridge the gap between traditional skills and modern industrial needs, enabling companies to remain competitive and innovative while maintaining high quality and productivity standards.

One of the key challenges facing the welding industry globally is the shortage of skilled professionals.

SWS play a vital role in attracting, developing, and retaining talent by promoting welding as a respected and rewarding profession. Through structured training pathways, mentorship programs, youth outreach, and career development initiatives, we can help nurture the next generation of welders, inspectors, and welding engineers, ensuring the long-term sustainability of the industry.

Beyond formal training, SWS act as knowledge hubs for the industry. Seminars, workshops, conferences, technical publications, and industry forums organized by SWS facilitate the exchange of experience, lessons learned, and best practices. This collective learning environment helps raise the overall technical maturity of the industry and encourages continuous improvement.

Certification and training endorsed by reputable bodies carry significant professional and international recognition.

This enhances the credibility of individuals and organizations, improves employability and mobility of professionals, and fosters trust among clients, regulators, and stakeholders. It also supports alignment with global industry expectations, particularly in cross border projects and multinational supply chains.

SWS has been approved by the International Institute of Welding (IIW) as an Authorised Nominated Body (ANB) to conduct IIW Welding Inspection Personnel (IWIP) qualification examinations in Singapore for Basic, Standard and Comprehensive levels. On successful completion of course and examination, candidates will be issued with a IIW Diploma by SWS as an Authorised Nominated Body (ANB).

In addition to the IIW qualification for welding inspection personnel, SWS also offers the following courses and certification on a regular basis:

- a. API 653 – Aboveground Storage Tank Inspector
- b. API 510 – Pressure Vessel Inspector
- c. API 570 – Piping Inspector
- d. API 571 – Corrosion and Materials
- e. API 577 – Welding Inspection & Metallurgy
- f. API 580 – Risk Based Inspection
- g. Visual Inspection
- h. American Welding Society (AWS) Certified Welding Inspector
- i. Safety in Welding & Cutting Processes
- j. Structural Welding Design
- k. Metal Joining & Cutting Processes
- l. Apply Metallurgy Principles

As at 31st March 2026, the Society has conducted a total of 882 certification examinations under the British Institute for Non-destructive Testing (BINDT) Personnel

Certification for NDT (PCN) scheme in the multi-sector, weld and aerospace sectors for the various NDT methods.

Welding education and training provided by SWS are essential pillars for ensuring quality, safety, innovation, and sustainability in the welding industry. By developing competent professionals, supporting compliance, advancing technology adoption, and fostering knowledge sharing, SWS play a strategic role in strengthening both industry performance and public confidence in welded structures. Their contribution extends beyond skills development, shaping the future resilience and excellence of the welding profession as a whole.

5.0 International Affairs Committee

Chairman:

Dr Sun Zheng

For the year 2025/2026, the Society has actively participated in several regional and international events. Through these engagements, SWS has strengthened its global network, enhanced collaborations, and reinforced its position within the international welding community. These efforts will contribute to making the Society stronger and more competitive.

Key engagements include:

- **42nd Asian Welding Federation (AWF) Meetings**
Ulaanbaatar, Mongolia | 23–25 May 2025
Attended by Mr Sze Thiam Siong and Mr Perianan Radhakrishnan
- **78th International Institute of Welding (IIW) Annual Assembly and International Conference on Welding and Joining**

Genoa, Italy | 22–27 June 2025

Attended by Prof John Pang, Mr Perianan Radhakrishnan, Mr Sze Thiam Siong, and Dr. Sun Zheng

2025 (13th) “ARC Cup” International Welding Competition Weifang, Shandong, China | 5–10 September 2025 Attended by Dr. Sun Zheng

- **43rd Asian Welding Federation (AWF) Meetings**

Nanning, China | 24–27 October 2025

Attended by Mr Sze Thiam Siong and Mr Perianan Radhakrishnan

- **International Institute of Welding (IIW) Intermediate Meeting**

Genoa, Italy | 19–23 January 2026

Attended by Dr. Sun Zheng

- **IAB – International Authorisation Board Group A (Education, Training, and Qualification) Meeting (Online)**

20–22 January 2026

Attended by Mr Perianan Radhakrishnan, Mr Sze Thiam Siong, and Dr. Sun Zheng

Upcoming Milestone

We are pleased to announce that SWS has successfully secured the hosting of the **2028 IIW International Congress** in Singapore, scheduled for **4–7 April 2028**. This represents a significant milestone and reflects international recognition of SWS’s capabilities in organizing large-scale global events.

The Congress, titled: “**2028 IIW International Congress – Advancing Intelligent Welding and Additive Manufacturing for a Sustainable Future**,” will bring together leading experts and industry stakeholders from around the world.

Preparations are currently underway, including the selection of a professional event organizer to support the planning and execution of this prestigious event.

We warmly encourage all members to come forward, contribute, and actively participate in making this Congress a resounding success, showcasing Singapore’s excellence on the global stage.

6.0 Publication Committee

Chairman:

Mr Ong Beng Tiong

What’s shaping the future of welding in Singapore?

If you’ve not explored SWS Weldpoint, you are missing the spark that keeps Singapore welding industry connected. Published by the Singapore Welding Society (SWS), Weldpoint brings together the latest updates, technical insights, and real voices from across Singapore’s welding community, where ideas fuse and innovation takes shape.

Strike an arc and explore the latest issues here: <https://sws.org.sg/publication/sws-weldpoint/>



Beyond updates, it's a platform that reflects where we are today, and more importantly, where we are heading next.

But every strong weld needs the right input. Our community needs new energy - fresh perspectives, young talent, and professionals ready to lay down new beads of ideas and experience.

If you are a student, welding inspector, welding engineer or early-career professional, this is your opportunity to step in. Share your knowledge, contribute articles, and help strengthen the fabric of our industry.

SWS is more than events and publications, it's where the next generation helps build, bond, and shape the future of welding in Singapore.

Don't stay on the sidelines, ignite your contribution and be part of the movement.
 #SingaporeWeldingSociety #SWSWeldpoint
 #WeldingCommunity #Engineering
 #YoungEngineers #FutureOfWelding
 #ProfessionalGrowth #SingaporeIndustry

7.0 Welding Technology Committee

Chairman:

Mr Bong Kong Lee

Vice Chairman:

Mr Goh Chon Min

Laser Technology in the Shipbuilding Industry was reviewed. The shipbuilding industry is undergoing a significant technological transformation, driven by persistent demands for greater efficiency, stringent environmental compliance, and unprecedented levels of manufacturing precision. Laser technology is emerging as a key enabler of this shift, offering disruptive

potential across the entire lifecycle of a vessel, from initial construction to long-term maintenance and repair. As shipbuilders navigate a highly competitive landscape, the adoption of laser-based systems represents a strategic move toward more automated, cost-effective, and sustainable operations.

The core market for laser welding within the marine industry is currently valued at approximately 2.1 billion USD. This segment is poised for robust expansion, with a projected compound annual growth rate (CAGR) of 6.8% through 2028, a pace that significantly outstrips the growth of traditional welding technologies in the sector.

A detailed write-up is available in our Weldpoint March 2026 issue.

8.0 Welding Standardization Committee

Chairman:

Prof John Pang

The Welding Standardization Committee continue to support of Enterprise Singapore and SMF, to develop international standards on welding and allied processes.

With the adoption of SS ISO 3834 and SS ISO 9606 standards, SWS Welding Standardization Committee is promoting the use of the following Standards for their business operations.

SS ISO 3834: Part 1 to 5

- SS ISO 3834-1:2022 (Quality requirements for fusion welding of metallic materials - Part 1: Criteria for the selection of the appropriate level of quality requirements)

- SS ISO 3834-2:2021 (Quality requirements for fusion welding of metallic materials Part 2: Comprehensive quality requirements)
- SS ISO 3834-3:2021 (Quality requirements for fusion welding of metallic materials Part 3: Standard quality requirements)
- SS ISO 3834-4:2021 (Quality requirements for fusion welding of metallic materials Part 4: Elementary quality requirements)
- SS ISO 3834-5:2022 (Quality requirements for fusion welding of metallic materials Part 5: Documents with which it is necessary to conform to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4).

SS ISO 9606: Part 1 to 5

- SS ISO 9606-1:2021 (Qualification testing of welders Fusion welding Part 1: Steels)
- SS ISO 9606-2:2021 (Qualification test of welders – Fusion welding – Part 2: Aluminium and aluminium alloys)
- SS ISO 9606-3:2021 (Approval testing of welders – Fusion welding – Part 3: Copper and copper alloys)
- SS ISO 9606-4:2021 (Approval testing of welders – Fusion welding – Part 4: Nickel and nickel alloys)
- SS ISO 9606-5:2021 (Approval testing of welders – Fusion welding – Part 5: Titanium and titanium alloys, zirconium and zirconium alloys)

9.0 Technical Talks Committee

Chairman:

Mr Lim Zhi Yang

Laser Technology: Advancing Modern Welding Practices

A technical talk on Laser Technology was held on 6 June 2025 at the SWS office, attracting over 40 members and guests. Speaker Mr Bob Wang of HeroLaser explained the history, development, and applications of laser welding in industries like automotive, aerospace, electronics, and medical devices. He also introduced HeroLaser's handheld welding machines, highlighting their precision and efficiency. The event included networking over dinner and ended with an enthusiastic Q&A session, showing strong industry interest.

Welding Duplex Stainless Steel and How to Optimise the Weld Performance

On 29 August 2025, SWS, together with the Nickel Institute and IMO, hosted a webinar on welding duplex stainless steels, attracting 62 participants via Zoom and YouTube. Speaker Dr. Roger Francis shared expert insights on factors affecting weld performance, including joint design, heat input, and microstructure control. He discussed methods to improve corrosion resistance and durability through filler selection, shielding gases, cleaning, and advanced testing. The session concluded with practical case studies and received very positive feedback.

Webinar: EN 1090 in Focus: Raising the Bar for Structural Integrity

On 9 October 2025, SWS hosted a webinar on EN 1090, presented by Mr Abdul Kadher with over 70 participants attending. The session explained EN 1090, a key European

standard for steel structures covering quality assurance, safety, and compliance for CE marking. It highlighted Singapore's alignment with Eurocodes to strengthen construction standards and competitiveness. Mr Kadher also discussed challenges in adopting SS EN 1090, including certification, training, and system upgrades, followed by an interactive Q&A session.

ASTM and EN ISO compliance for Computed Radiography and Digital Radiography technologies; Krautkrämer RotoArray compact, precise corrosion inspections on the go

The seminar held on 31 October 2025 focused on transitioning weld inspection from traditional radiographic film to digital solutions. It highlighted Computed Radiography systems for their flexibility and digital detectors for improved image quality, including bendable options for pipe welds. The session discussed standards for image interpretation and system performance. Waygate Technologies shared expertise on safe digital conversion, explaining technological differences, benefits, limitations, and best practices for weld inspection applications.

Creating education, training, skills and careers opportunities to improve a country's National Welding Capability (NWC)

The webinar took place on 26 November 2025 and discussed improving national welding capability through education, training, skills, and career development. Speaker Chris Smallbone, a respected welding industry leader, shared strategies, best practices, and international experience in building effective national welding systems. The session covered workforce development, certification, industry needs, funding support, training centres,

and career promotion, helping countries strengthen welding quality, productivity, and economic growth

10.0 Membership Committee

Chairman:

Mr Suggu Ravi Chandra Reddy

The membership committee has outlined its goals and objectives for the upcoming year, aligning them with the society's overarching strategic plan as per the roadmap.

Identifying challenges in terms of membership growth and retention is crucial. To address this, strategies have been defined in the roadmap to increase membership. These include defining the benefits of joining the society and implementing targeted marketing campaigns across various channels such as email, online portals, and social media platforms to reach potential members.

The implementation of our new computer system and website is expected to significantly enhance the efficiency of our administrative processes.

For members who have not updated their profiles, we encourage you to reach out to the Chairman or Vice Chairman of the membership committee. Additionally, we welcome your feedback via our website, and we assure you that we will respond promptly.

We want to express our heartfelt gratitude for your continued support and active involvement over the years. Your contributions and participation have been invaluable to the Singapore Welding Society.

Thank you once again for being an integral part of our society. We are truly fortunate to have members like you, and we genuinely appreciate your dedication and active participation.

As of 26 Apr 2026, the membership status is as follows:

Categories	Apr-26
Associate	1
Corporate	172
Fellows	10
Full	140
Student	1
Total	324

On the evening of April 17th, 2026, the Singapore Welding Society (SWS) hosted its annual Members' Night at the Chevron function room at Boon Lay Way. The highlight of the event was the roving Magic show and interactive stage magic.

The President of SWS presented the Distinguished Corporate Member Award to HIAP SENG ENGINEERING LTD, PEC PTE LTD, KOBELCO WELDING ASIA PACIFIC PTE LTD, UTOC ENGINEERING PTE LTD, SGS TESTING & CONTROL SVCS S'PORE P/L, ASTER CHEMICALS & ENERGY PTE LTD, ESAB ASIA/PACIFIC PTE LTD, MTQ ENGINEERING PTE LTD, ASTER CHEMICALS & ENERGY PTE LTD (Bukom), SINGAPORE TAKADA INDUSTRIES PTE LTD, SINGAPORE REFINING COMPANY PRIVATE LIMITED.

This award is bestowed upon eligible corporate members who have been affiliated with SWS for 25 years or more. The Society acknowledges and appreciates the steadfast support and significant contributions made by these corporate

members throughout the years and looks forward to their continued support in the future.

11.0 Certification and Common Welder Qualification Scheme (CWQS) Committee

Chairman:

Mr P Radhakrishnan

Vice Chairman:

Mr Khoo Kok Leong

- a. SWS Common Welder Qualification Scheme (CWQS) is in place. The following ten (10) WQTCs are currently in the scheme:
 - i. ACE Quality Testing & Inspection Services Pte Ltd
 - ii. A-Star Testing & Inspection (S) Pte Ltd
 - iii. Cast Laboratories Pte Ltd
 - iv. Cotech Process Services Pte Ltd
 - v. Goodwill Engineering & Inspection Services Pte Ltd
 - vi. Leads Specialist Services Pte Ltd
 - vii. Masterscan Engineering Pte Ltd
 - viii. Setsco Services Pte Ltd
 - ix. SGS Testing & Control Services Singapore Pte Ltd
 - x. Worldscan Engineering Pte Ltd
- b. Interviewing and assessment of additional CWQS Welding Inspectors was carried out during the past year when requested by the WQTCs.
- c. Surveillance assessment of A-Star Testing & Inspection (S) Pte Ltd and SGS Testing & Control Services Singapore Pte Ltd have been planned for 2026. All other WQTCs were assessed and renewed in 2025.

12.0 Operations and Technology Roadmap (OTR) Committee

Chairman:

Mr Sze Thiam Siong

Vice Chairman:

Prof John Pang

SWS Membership Initiative – with our SWS LinkedIn site we are now looking into SWS membership branding, and outreach initiatives to recruit both corporate members as well as young professionals into SWS.

SWS Academy – We are still looking into setting up a “SWS Academy” to cater to welding courses, certification, career development of welding professionals and personnel.

Welding Technologies – Promote advances in welding technologies and applications including WAAM / Wire ARC, AR/VR training simulations, Machine Visioning, Artificial Intelligence, Sustainability related awareness via seminar and webinar talks and participation in related events.

Industry Partnership – Promote partnership and collaborations with Industry, Corporate Members and partners to broaden SWS involvement in the industrial ecosystem.

13.0 Information Technology (IT) Committee

Chairman:

Mr Simon Wong

In the term of 2025/2026, it is exciting that we started LinkedIn presence since its launch in September 2025 (7 months ago) and is managed by Chris Teoh, our

IT Committee Member. What began as a modest platform is now evolving into a credible channel for industry updates, technical insights, and community engagement. From an initial base of 40 followers, we have grown to 159 followers (April 2026), with 278 page views and 116 unique visitors, a positive indication that we are reaching new audiences across the industry. With 17 posts generating 5,673 impressions, alongside 137 reactions, 4 comments, and 1 repost, our visibility is building. The next step is clear: transforming visibility into stronger engagement and conversation. Encouragingly, our reach is not limited to Singapore. While 38% of followers are based locally, we are seeing growing interest from overseas including India, the Americas, Europe, and across Asia, reflecting the wider relevance of our community. This progress has been achieved entirely organically, without marketing campaigns, paid promotion, or external amplification, highlighting that a strong social media presence is an important part of our future strategy for the Singapore Welding Society.

Overall, the foundation is in place. Now, we must strengthen participation and amplify our collective voice. Let’s build a stronger, more visible welding community together.

We have also continuously enriched more content in SWS website. Beside the regular updates of our events and activities, we have also uploaded substantial numbers of technical articles related to welding in “Welding Technology” session. Only SWS members who login to their account can access these valuable articles. We will continuously provide such value-added benefits to SWS members from time to time.

In January this year, there was a disturbing incident happened that some members received repeated emails within short period of time. After realizing this problem, we carried out the investigation immediately to identify the root cause of this hidden problem which had never occurred previously since the email blasting function was launched in 2023. After fixing the issue, we also carried out careful testing to ensure such problem has been satisfactorily resolved. We would like to take this opportunity to express our apology for all inconveniences caused to you by this incident.

The improvement of SWS system and website is a never-ending process. We are always looking for your feedback, no matter whether it is your negative experience due to the hidden default of the system or your positive opinion about what we can do better. Please also be reminded to review and update your membership profile regularly so that our messages can be delivered to you timely and accurately.

14.0 Conclusions

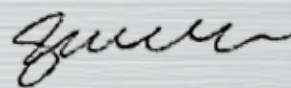
In summary, on behalf of the SWS Council we are pleased to have contributed to the following deliverables over the past year.

- Engaging with the AWF regional and IIW international activities and events.
- Members Night event for SWS members to celebrate and network together.
- Organized seminars and webinars on welding-related events.
- Services to SWS members on Common Welder Qualification Scheme (CWQS).
- Facilitating welding and inspection related education and training programs.
- Contributed to the discussions on welding related national and international standards.
- Launched the SWS LinkedIn site to update members and interact with potential new members.
- Updated the SWS website to inform members of recent events and activities.
- Revised the SWS Constitution which is approved by ROS in January 2026.
- Received approval from IIW to organize an IIW International Congress, 4-7 April 2028.

We would like to thank all SWS members for your strong support over the past year for our SWS activities and your participation at this 48th SWS Annual General Meeting on 29 May 2026.

I would like to extend my sincere acknowledgement and special thanks to our SWS Council Members for their excellent contributions to the Singapore Welding Society.

Warmest Regards,



Professor Pang Hock Lye John

President

Singapore Welding Society

NEW MEMBERSHIP FOR MAR 2026 TO MAY 2026

CORPORATE MEMBERS

Company Name	Contact Person	Join Date
YAMATO ENERGY PTE LTD	Ms Cheng Betty	1-Apr-26
GREENMARK CONSTRUCTION PTE LTD	Mr Awal Mohammad Rabiul	1-Apr-26
TRUMPF PTE LTD	Mr Lindemann Markus	1-May-26

FULL MEMBERS

Name	Designation	Company Name	Join Date
Mr Mani Kandasamy	QA/QC Engineer	CORA ENVIRONMENT GROUP PTE LTD	1-Apr-26
Mr Kelvin Por	Technical Manager	WELDTTEST ENGINEERING & SERVICE PTE LTD	1-May-26
Mr Murugan Narayanan	Senior Mechanical Inspector	APPLUS SINGAPORE PTE LTD	1-May-26

NEW CORPORATE MEMBER PROFILE

YAMATO ENERGY PTE LTD



Nature of Business:

Process Plant Engineering Design and Consultancy Service & Electrical Works

Yamato Energy and its partners Metro Marine Engineering and Trading Pte Ltd, Advance Engineering and Testing (AET) Pte Ltd and Wynergy Engineering Pte Ltd mission statement is to provide excellent service and customer satisfaction.

Yamato Energy's main priority is our customers, we're always looking for new ways to grow and broaden our partnerships.

Each company provides a unique specialization to provide a customer with a complete service.

GREENMARK CONSTRUCTION PTE LTD



Nature of Business:

Contractor Provider

Greenmark was first incorporated and established in 2007 as a General Contractor for Building & Civil Construction, including major upgrading works and Process/Industrial Plant Engineering Design & Consultancy Services.

Over the years, we have expanded our expertise to become a holistic service provider. Beyond being a leading ITE-approved training center for courses like Electrical Fitting, Metal Scaffolding, and Rigging, we now offer a full spectrum of industrial solutions ranging from manpower outsourcing to safety consulting.

TRUMPF PTE LTD



Nature of Business:

Equipment manufacturer for machine tools and lasers

TRUMPF was founded in 1923 as a series of mechanical workshops and has since developed into one of the world's leading companies for machine tools, laser technology, and electronics for industrial applications.

TRUMPF offers manufacturing solutions in the fields of machine tools, laser technology, electronics and power tools. Regardless of how specific and complex your challenges in the manufacturing industry are, you can rely on innovative products. As a partner to our customers, we drive the digital networking of the manufacturing industry through consulting, platform and software offerings.

Joining, cutting, shaping: Our technologies inspire people to create, build, and make what was previously unimaginable a reality – now and in the future. Whether lasers, machine tools, EUV or electronics – the nearly unlimited possibilities of the TRUMPF universe combined with creative energy creates technological worlds for future generations that can scarce be imagined today.

RETHINKING GAS SAFETY IN WELDING: LESSONS EVERY WELDING PROFESSIONAL MUST KNOW

Every gas used in welding presents its own specific risk profile. While welding, cutting, and heating operations remain essential across industries, accidents involving welding gases continue to occur, and these incidents are rarely the result of a single failure. More often, they occur when hazards are underestimated, critical controls are absent, or unsafe practices gradually become normalised in everyday operations. Below are the most common welding gases, their primary hazards, and the critical controls required to manage them effectively.

Fuel Gases: Acetylene and Propane

Widely used for oxy-fuel cutting, heating, and brazing applications.

Primary Hazards

- Gas leaks
- Flashbacks
- Fire and explosion

Critical Controls

- Use flashback arrestors and non-return valves
- Perform leak testing before use
- Inspect hoses, torches, and regulators regularly
- Keep cylinders away from ignition sources
- Store and transport cylinders correctly

Acetylene requires particular caution due to its inherent instability under improper pressure, handling, or storage conditions.

Oxygen

Used in combination with fuel gases to support combustion and enable cutting and heating operations.

Primary Hazards

- Rapidly accelerated combustion
- Violent ignition in oxygen-enriched atmospheres
- Fire due to oil or grease contamination

Critical Controls

- Never use oil or grease on oxygen equipment
- Open cylinder valves slowly to prevent adiabatic compression
- Use only oxygen-compatible equipment
- Keep hoses clean and protected from damage
- Never use oxygen for ventilation or cleaning purposes

Oxygen itself does not burn but it significantly intensifies combustion and fire severity.

Shielding and Purging Gases: Argon, Carbon Dioxide, and Nitrogen

Argon and carbon dioxide, including their mixtures, are widely used in TIG and MIG/MAG welding processes. Nitrogen is commonly used for purging, backing, and pressure testing operations.

Primary Hazards

- Oxygen displacement
- Asphyxiation in confined or poorly ventilated spaces

Critical Controls

- Conduct atmosphere testing before and during work
- Ensure effective ventilation at all times
- Continuously monitor oxygen levels in enclosed spaces
- Control purge gas release rates during operations
- Strictly follow confined space entry procedures

These gases are often invisible, odourless, and non-flammable, making oxygen displacement hazards particularly difficult to detect without proper monitoring.

The 5 Controls That Prevent Most Gas Incidents

1. Build Competence Through Training

Personnel must clearly understand gas behaviour, flashback risks, atmosphere testing, purging hazards, and emergency response procedures. Training should develop true operational awareness, not just procedural compliance.

2. Inspect Equipment Before Use

Inspect regulators, hoses, torches, valves, and flashback arrestors for leaks, damage, contamination, and wear.

3. Control the Fire Triangle

Continuously manage fuel sources, oxygen availability, and ignition sources. Remove combustibles and control the spread of sparks and slag.



THE 5 CONTROLS THAT PREVENT MOST GAS INCIDENTS



BUILD COMPETENCE THROUGH TRAINING

Personnel must clearly understand gas behaviour, flashback risks, atmosphere testing, purging hazards, and emergency response procedures. Training should develop true operational awareness, not just procedural compliance.



INSPECT EQUIPMENT BEFORE USE

Check regulators, hoses, torches, valves, and flashback arrestors for leaks, damage, contamination, or wear.



CONTROL THE FIRE TRIANGLE

Continuously manage fuel sources, oxygen availability, and ignition sources. Remove combustibles and control the spread of sparks and slag.



VERIFY THE ATMOSPHERE

Always test for oxygen levels and flammable gases before starting any hot work, at defined intervals during the operation, and especially after any breaks or interruptions.



HANDLE CYLINDERS CORRECTLY

Secure cylinders upright, protect valve assemblies, separate oxygen from fuel gases, and keep cylinders away from heat and mechanical impact.



EVERY GAS HAS A PURPOSE.

EVERY CONTROL HAS A PURPOSE.

SAFETY GIVES US ALL A FUTURE.



4. Verify the Atmosphere

Always test for oxygen levels and flammable gases before starting hot work, at defined intervals during the operation, and especially after any breaks or interruptions. This is critical when working in tanks, void spaces, pipelines, and other confined environments where atmospheric conditions can change rapidly and without warning.

5. Handle Cylinders Correctly

Secure cylinders upright, protect valve assemblies, separate oxygen from fuel gases, and keep cylinders away from heat and mechanical impact.

Final Thought

Gas welding and cutting operations will always involve inherent risks. However, most serious

incidents are preventable when gases, equipment, and working environments are managed with discipline and respect.

In welding safety, complacency is often the greatest hazard. The same gases that enable productivity can also cause fire, explosion, or fatal oxygen deficiency when improperly controlled. Whether dealing with acetylene, oxygen, argon, carbon dioxide, or nitrogen, the principle remains the same: every gas must be handled with knowledge, discipline, and respect.

Ultimately, the safest operations are not defined by experience alone, but by consistent controls, competent training, and continuous vigilance.

Note: This article was prepared with the assistance of AI tools and editorially reviewed by the author.

WE CHALLENGE YOU TO A DUELER



Engineered for productivity, ESAB handheld laser welder combines an integrated high-performance wire feeder, rugged mobility, and an intuitive smart-arc-style interface. Built to address the key challenges facing modern fabrication shops—precision, reliability, workforce shortages, floor space, and safety.

POWER AND PRECISION

A powerful 1500W laser delivers consistent welding on materials up to 6.5 mm thick. With lower heat input and a focused beam, DUELER produces cleaner welds, minimal distortion, and little to no post-weld cleanup.

DESIGNED FOR KEY INDUSTRIES

Automotive, Railways, Electronics, Aerospace, Medical Devices, Food Processing, and HVAC

THE WINNING CHOICE IN LASER WELDING.



Contact ESAB experts now to find out how DUELER can help you increase your revenue!

MP: +65 8186 2772 | DID: +65 6513 9188 | sales@esabasia.com | esab.com

GAS-TIGHT WELDING OF ALUMINUM PARTS

By Markus Lindemann, TRUMPF Pte Ltd

ABSTRACT

Due to the increasing sector of electric mobility, the demand for components like batteries, electric motors and power electronics is growing continuously. One of the major materials chosen for these parts are aluminum alloys. Furthermore the automotive approach of “Giga-Casting” leads to new welding applications of Aluminium body parts. But the choice for aluminum alloys gets along with material specific challenges such as pore formation and melt pool ejections caused by instabilities of the vapor capillary. Whereas the requirements are the gas-tight welding of the aluminum alloys for parts like heat exchangers made of wrought aluminum alloys or die casted housings for power electronics. This article unveils how a new beam shaping approach, the Multifocus technology, helps to stabilize the vapor capillary. The aluminum specific challenges, especially for gas-tight welding, are presented.

1. Introduction

The rapid development in the field of electric mobility is leading to a continuously growing demand for the rapid development of improved and more powerful components. This increasing demand also increases the need for productive manufacturing solutions to provide these high-performance components both in large volumes and in high quality. In the battery pack, new applications for lasers arise, especially in laser welding. These versatile applications often require the joining of wrought aluminum alloys or even die-casted aluminum, which tend to instabilities during the laser welding process, such as melt pool ejections and pore formation. One of the main

requirements for the weld seam in this sector is the media-tight joining for the production of cooling plates or electronic housings, such as inverters or high-voltage heaters (see Figure 1). To meet these challenges, a tailored beam forming approach was developed, which combines two beam shaping technologies to stabilise the welding process of aluminum materials.



Figure 1: eMobility applications require gas-tight welding of aluminum alloys. (Courtesy of Benteler and Kostal)

The sought for a gas-tight laser welding process for aluminum components with high productivity and consistently high-quality places high demands on the welding process which can be summarized as follows:

- defined and constant penetration depth
- mitigation of pores, melt pool ejections and cracks
- gas-tightness of the weld seam

Especially gas-tightness is a challenge, as any kind of instability in the welding process must be avoided. Next to factors that have to be taken care of prior to welding (e. g. material choice, technical cleanliness), the main impact on the tightness for aluminum is caused by the formation of pores and melt pool ejections. The main challenges in welding aluminum lie in the high viscosity of the melt and the concentrated energy input from the laser beam.

The formation of pores and melt pool ejections follows the same pattern and can be divided into 4 steps (see Figure 2). At the beginning (1), the vapor capillary becomes unstable due to an uneven power distribution at the capillary wall, which leads to a bulging of the capillary back wall. This bulge contains vaporous material under increased pressure. In the case of pore formation, the pressure increases further and the capillary pinches off (pinching effect) and a neck forms between the bulge and capillary. In the third step, a gas bubble forms in the melt pool, which no longer has a connection to the capillary. This gas bubble remains as a pore in the solidified material in the fourth step. According to this cycle a melt pool ejection occurs when the pressure of the bulge in the second step is too high and throws out the molten material above. To avoid this pore

formation, the capillary must be stabilized and a collapse of the vapor capillary during the welding process must be avoided.

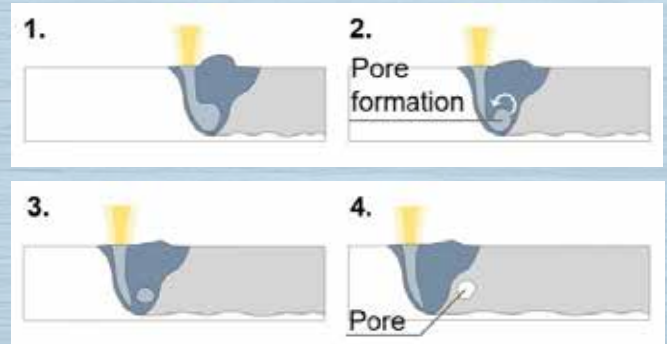


Figure 2: Cycle of pore formation during laser welding of aluminum alloys.

The aim of the experiments is to understand the interaction between the laser and the resulting vapor capillary. For this purpose, high-speed recordings of the welding process are analyzed. On the other hand, the weld seams are examined with regard to the formation of pores by using micrographs, visual inspection and both, X-ray and CT images. The digital X-Ray analysis shows a top view of the weld seam which gives an insight into the porosity distribution. Finally, a helium leak test is carried out to verify the gas-tightness (see Figure 3).

In-depth analysis of the weld seam quality and laser welding process

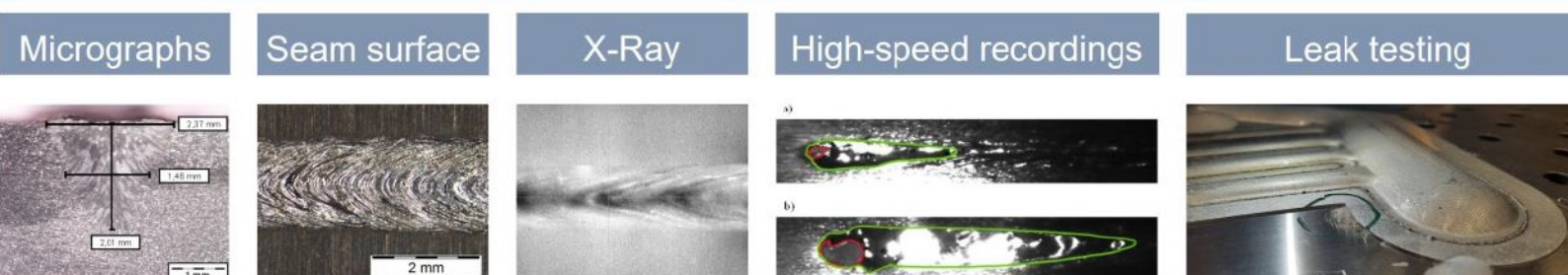


Figure 3: Methods of analysis for in-depth analysis of the laser welding process.

II. Experimental Procedure

The experimental investigation in this paper is divided into three parts. In the first part, the fundamental investigation of the interaction between beam shaping and the material is carried out. In particular, the characteristics of the vapor capillary are examined, as this is decisive for the stability of the welding process. Furthermore, the new technology will be applied to two eMobility applications. A comparison of the Multifocus approach with the state-of-the-art process for aluminium welding is carried out with a cooling plate. The strategy for welding die-cast aluminum will be presented on the basis of an electronic housing. The experiments are performed on a 5-axis laser machine TruLaser Cell 3000 with a laser power of max. 8 kW from TRUMPF Laser- und Systemtechnik GmbH. A dual core fibre with a core-ring-fibre ratio of 100 μm /400 μm is used for laser power delivery. As processing head the BEO D70 focusing optics is used.

III. Results

A. Multifocus technology – a beam shaping approach to stabilize the aluminum welding process

Previous investigations show various approaches of beam shaping as a strategy to stabilize the vapor capillary:



Figure 4: Different approaches in laser welding to stabilize the capillary.

The bi-focal technique is expanding the vapor capillary which enables a reduction in pore

formation. The problem with this approach is the directionality of the processing result. In order to weld complete components with different feed directions, a unidirectional and stabilized process is required. The Multifocus technology is a promising approach. Figure 5 (left) shows the beam profile which was developed by TRUMPF to stabilize the aluminum welding process. The figure shows the division of the laser beam into four partial beams, which are arranged in a square. It is also visible that each of the individual focal points is superposed by beam shaping with the BrightLine Weld technology. This superposition allows to seamlessly split the laser power between the core and the ring fiber, thus varying the power distribution in the weld zone. This tailored power distribution in the weld zone enables a significant enlargement of the vapor capillary opening, which leads to a unidirectional stabilization of the welding process (see Figure 5 right).

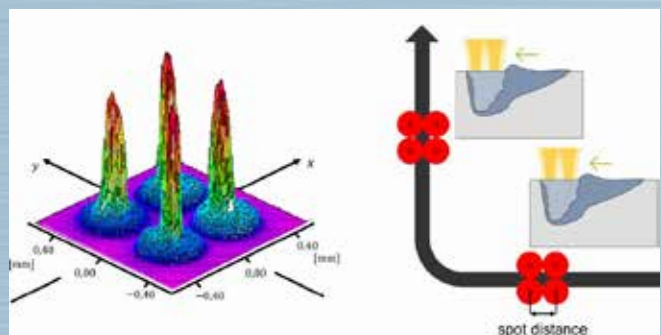


Figure 5: Left: Beam profile of Multifocus technology. Right: Scheme of unidirectional processing result and capillary stabilisation by using Multifocus technology.

The Multifocus technology offers an additional degree of freedom for adjusting the welding process, which is the distance between the individual foci. As shown in Figure 6 by using high-speed imaging of the vapor capillary, an ideal spot distance can be determined. This leads to maximum stabilization of the welding process together with the largest possible opening of the vapor capillary. The diagram shows if the spot distance is too small, no sufficient stabilisation of the laser welding process is achieved, at the

same time no contiguous vapor capillary is formed, when the spot distance is too large, which again leads to a low process stability. The right part of Figure 6 shows the comparison of two micrographs and the top view of the digital X-ray analysis of an overlap weld. One of the welds is welded using only the Multifocus technology and the other is welded using the superposition of Multifocus technology with BrightLine Weld. It is clearly visible in both, the micrograph and X-ray image, that the pore formation is merely avoided by combining Multifocus technology with BrightLine Weld. For this reason, the combination of Multifocus technology with BrightLine Weld technology will be referred to as Multifocus technology subsequently for convenience.

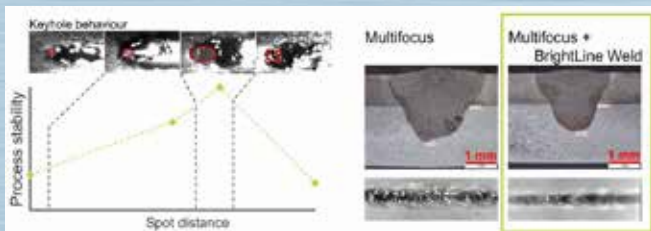


Figure 6: Left: Influence of the spot distance on the process stability. Right: Influence of the superposition of Multifocus technology with BrightLine Weld technology on the pore formation.

B. Welding of cooling plates – Comparison of standard process and Multifocus technology

Cold plates are a key part of the thermal management system of a battery pack, where in this paper the cooling plate design consisting of two overlapping sheet metals are considered. The joining geometry is designed as an I-seam at an overlap joint, with the cooling medium being guided between the two welded sheets. For the experiments in this paper a demonstrator is designed, that displays the joining of a cooling plate at the bottom of a battery tray (see Figure 7 a). The aluminum alloy used in this demonstrator is EN AW-5754 (AlMg3) with a thickness of 1mm (top sheet) and 2mm (bottom sheet) and a

requested penetration depth of $PD = 2.0$ mm. This experiment compares the state-of-the-art welding process with the new Multifocus approach. For this comparison the feed rate is set to $v = 8$ m/min and the laser power is set to $P = 2800$ W for the standard process and to $P = 4800$ W for the Multifocus technology. All other parameters are kept constant during the trials.

The comparison of the micrographs in Figure 7 b shows that the application of the Multifocus technology increases the connection width by 16%. Additionally, process pores are already visible in the micrographs of the standard process. The standard deviation of the weld depth is 0,14 mm for the standard process and respectively 0,12 mm for the Multifocus technology. Figure 7 c displays an uneven weld surface and spatter formation for the standard process. In contrast, using the Multifocus technology leads to a uniform and even seam surface, which results from the stabilization of the welding process. Another effect of the Multifocus technology is the considerable formation of smoke, which is visible next to the weld seam. This smoke consists of condensed base material and arises from the enlarged opening of the capillary but can be removed without any residues.

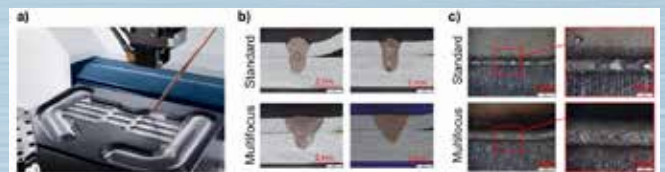


Figure 7: a) Welding of cooling plate demonstrator for process comparison between standard process and Multifocus technology b) Comparison of micrographs c) comparison of seam surface quality.

For the qualitative and quantitative evaluation of the pore formation, a CT scan of the weld samples is carried out (see Figure 8). Several cross sections, a top view in the interface between top and bottom plate and a longitudinal section in the middle of the seam are analysed. Furthermore, the pore volume

consisting of process and edge pores is calculated and compared. The evaluation of the top view unveils that both processing strategies generate small pores, so-called edge pores, at the edge of the weld seam. Due to their size, these pores are not critical for the gas-tightness. In contrast to the Multifocus technology, where no process pores are visible in the CT-analysis, large process pores occur in the standard process. The cross section through these pores shows an extent over the entire joint and hence lead to leakage. The longitudinal section also illustrates the formation of pores in the standard process and clearly shows the decrease of pore formation using the Multifocus technology. The comparison of the pore volume in relation to the molten material points out that the pore formation is reduced by 90% from 3.17% to 0.346% by using the Multifocus technology and the following stabilisation of the vapour capillary.

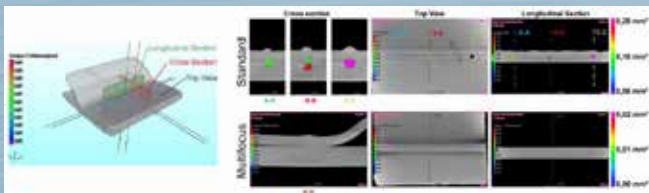


Figure 8: CT-analysis of cooling plate. Left: Position of the Sections. Right: Cross section, top view in joint surface and longitudinal section in the middle of the seam. Size of pores is shown in colours depending on the volume.

In the last step, the welded cold plates are leak tested with helium at a pressure of 2.5 bar. All cold plates welded with Multifocus technology are proven gas-tight. In contrast, all cold plates welded with the standard process show multiple leaks. The investigation with leak detection spray shows that two types of leakage can be distinguished (see Figure 9). On the one hand, leaks in the seam surface, which can be related to melt pool ejections. On the other hand, leakage is detected in the joint interface, which relates to

the process pores in the joint plane detected in the CT-analysis and the resulting reduction of the connection width. The problem of such leakage is that it cannot be detected by an optical inspection of the weld seam. The comparison of the standard process with the Multifocus technology shows in all analyses that tailored beam shaping enables a significant stabilisation of the welding process. Thus empowering the mitigation of pores and producing gas-tight weld seams in wrought aluminum alloys with high productivity.



Figure 9: Different types of leakage in cooling plates welded with the standard process.

C. Processing strategy for welding of die-cast aluminum

In addition to wrought aluminum alloys, components made of die-cast aluminum are increasingly being utilized in electromobility. In addition to the challenges already described for welding of aluminum alloys, the processing of die-cast aluminum alloys also comprises the presence of pores in the base material that are already under high pressure due to the manufacturing process. In the welding process, these pores lead to an additional destabilisation of the vapour capillary and to explosive ejections of the molten material, resulting in large pores and even holes in the weld seam. For the studies in this contribution, a die-cast aluminum alloy EN AC-44300 (AlSi12Fe) is used as a housing and a wrought aluminum alloy EN AW-5754 (AlMg3) is employed for the cover. In

analogy to the examination of the cooling plates, a multi-stage investigation is performed for the die-casted aluminum housings. This analysis approach consists of micrographs and final gas-tightness measurements.

Although the Multifocus technology leads to a stabilization of the vapor capillary, ejections and pores can still occur due to inclusions in the base material. Using a specially developed double pass strategy, pores and ejections can be healed by a second pass and thus a gas-tight weld seam can be achieved. During the second pass, the parameters are adjusted that no additional die-cast is melted in order to avoid the formation of new process defects. In a prototype series (n = 300 parts) only one single part failed the leakage test, which underlines the capability of the double pass strategy to produce gas-tight parts in die-cast aluminum.

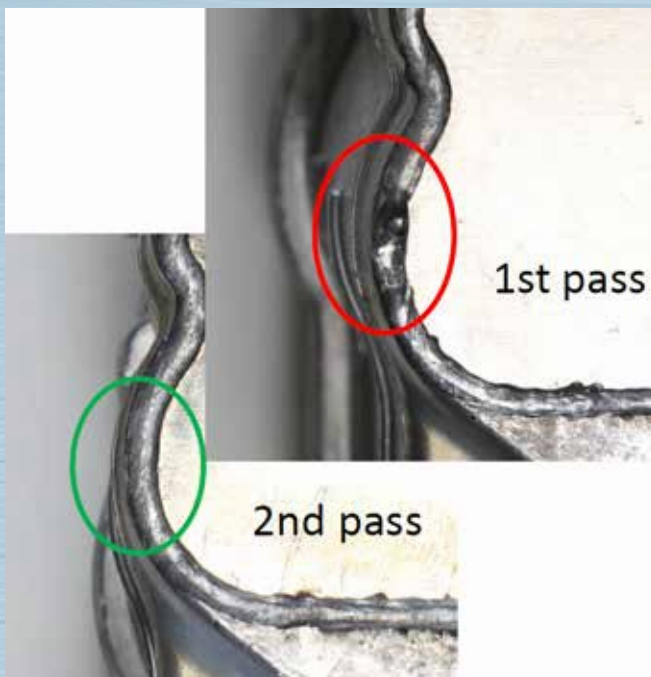


Figure 10: Influence of the second pass in die cast aluminum.

IV. Conclusion

The superposition of Multifocus technology with beam shaping (BrightLine Weld) stabilizes the capillary and prevents it from collapsing. This approach increases the process stability, improves the weld seam quality by the mitigation of pores and enables gas-tight welding of aluminum alloys. By using Multifocus technology, an increase in the capillary opening and an enlarged melt pool have been identified. At the same time, a reduced spatter formation was observed, and an increase of the intersection width was verified by micrographs. Furthermore, an improvement of the uniformity of the seam surface is achieved.

Finally for two different applications, cooling plates in battery packs and aluminum die-cast housings for power electronics, representative requirements regarding gas-tightness are fulfilled.

44TH ASIAN WELDING FEDERATION (AWF) MEETINGS IN HANOI, VIETNAM

By Sze Thiam Siong and P Radhakrishnan



Group photo of the delegates at the 44th Asian Welding Federation (AWF) Meetings, Hanoi

The 44th Asian Welding Federation (AWF) Meetings and the 19th Asian Welding Technology & Applications Forum were successfully hosted by the Vietnam Welding Society (VWS) from 14 to 16 May 2026 in Hanoi, Vietnam. Concurrently, the 17th International Exhibition on Metalworking & Welding Technology in Vietnam – METAL & WELD VIETNAM 2026 and the Vietnam International Hardware and Manual Electric Tools Exhibition – HMET EXPO VIETNAM 2026 were also held during this period. In addition, VWS organized the International Welder Competition - Golden Hand Cup from 14 to 15 May 2026. All these events were held at the Friendship Cultural Palace, Hanoi.

The AWF Meetings and the Technology & Applications Forum, which are biannual events, were well attended by delegates from welding societies and institutes across Asia. Full member representatives included the China Welding Association (CWA), Chinese Welding Society



SWS representatives at the meeting

(CWS), The Indian Institute of Welding (IIW), Indian Welding Society (IWS), Indonesian Welding Society (API-IWS), Japan Welding Engineering Society (JWES), Malaysian Welding and Joining Society (MWJS), Welding Institute of Malaysia (WIM), Mongolian Material Science and Welding Society (MMSWS), The Myanmar Society of Welding Engineering (MSWE), Philippine Welding



Assoc. Prof Dr. Bui Van Hanh, President of VWS presenting a memento to Mr Sze Thiam Siong and Mr P Radhakrishnan, Past Presidents of SWS

Society (PWS), Singapore Welding Society (SWS), Welding Institute of Thailand (WIT) and the Vietnam Welding Society. Associate members in attendance included Beijing ARC Xinxing Science and Technology Co. Ltd. (BAX), the Welding Technology Division of the China Building Material Machinery Association (CBMMA-WTA) and Kampuh Welding Indonesia (Surabaya).

The meetings provided a platform for committees and sub-committees to deliberate on key areas including the Common Welder Certification Scheme (Audit, Documentation, Technical Expert, Implementation, and Certification), standardization and specification development, welding technology and applications, the AWF website, marketing and IT initiatives, education and training, and membership matters. These discussions concluded in the AWF Steering Committee Meeting and the 44th AWF Governing Council Meeting on 15 May 2026, during which several proposals were reviewed and approved.

The 19th Asian Welding Technology & Applications Forum comprised of five sessions:

- (1) Industry Trends
- (2) Welding Applications in Cutting-Edge Industries
- (3) Advanced Welding for Green Manufacturing
- (4) Digital Transformation in Welding (including IoT)
- (5) Standards & Certification.

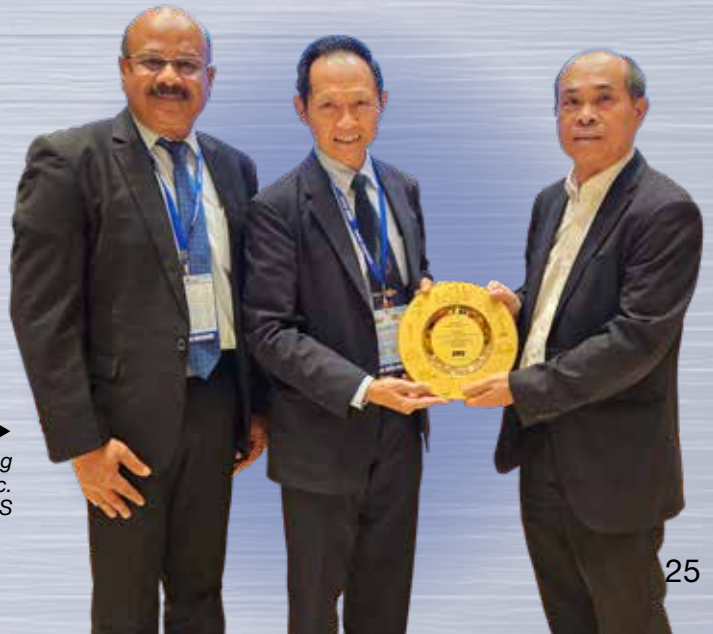
The Forum featured twenty-one distinguished speakers from across Asia who shared their insights on emerging trends, technological advancements, and best practices in the welding industry.

Following the Forum, AWF delegates visited the Joining and Welding Research Institute (JWRI HUST-UOsaka) at the Hanoi University of Science and Technology. The Research Institute was established within the framework of the project 'Strengthening research capacity in welding for HUST – Vietnam' supported by a grant from the Government of Japan. It functions under the School of Mechanical Engineering, HUST and comprises three specialized laboratories: Welding Process, Welding Metallurgy and Welding Physics.

VWS graciously hosted the AWF delegates to dinners on 14 and 15 May where the strong camaraderie among AWF members was clearly evident through both formal engagements and social interactions.

On behalf of SWS, we express our sincere appreciation and gratitude to the Vietnam Welding Society for their excellent organization, thoughtful planning and warm hospitality. Their commitment and attention to detail contributed greatly to the success of these events.

The next AWF meetings and Forum are scheduled to be held in Tokyo, Japan from 16 to 19 September 2026, in conjunction with the Japan International Welding Show 2026.



Mr Sze Thiam Siong and Mr P Radhakrishnan presenting a commemorative plaque on behalf of SWS to Assoc. Prof Dr. Bui Van Hanh, President of VWS

SINGAPORE WELDING SOCIETY HOLDS ITS 48TH ANNUAL GENERAL MEETING

Building Momentum for the Future of Welding in Singapore

The Singapore Welding Society (SWS) held its 48th Annual General Meeting on 29 May 2026 at Hilltop Garden Restaurant, Civil Service Club, Bukit Batok. The meeting brought together members of the welding community to review the Society's progress, approve the annual reports and financial statements, elect Council members for the new term, and discuss the future direction of SWS.

The meeting was chaired by SWS President Prof John Pang Hock Lye, with Honorary Secretary Mr Yusoo Aynuddin guiding the proceedings. In his President's Report, Prof Pang highlighted the Society's continued commitment to education and training, certification, standardisation, technical knowledge-sharing, publications, membership engagement, international affairs, and technology development.

Education and training remained a key pillar of SWS. As an Authorised Nominated Body of the International Institute of Welding, SWS continues to support IIW Welding Inspection Personnel qualifications in Singapore. The Society also conducts regular courses and certification programmes covering API inspector qualifications, AWS Certified Welding Inspector, Visual Inspection, Safety in Welding and Cutting Processes, Structural Welding Design and related technical subjects. As at 31 March 2026, SWS had conducted 882 certification examinations under the BINDT PCN scheme across multi-sector, weld and aerospace sectors.

A major highlight of the year was SWS's successful bid to host the 2028 IIW International Congress in Singapore from 4 to 7 April 2028. With the





theme “Advancing Intelligent Welding and Additive Manufacturing for a Sustainable Future”, the Congress will be an important milestone for the Society and an opportunity to showcase Singapore’s welding capability to the international community.

The AGM also reaffirmed the importance of SWS Weldpoint, the Society’s quarterly publication, as a platform for technical insights, industry updates and community voices. Members, corporate members, engineers, inspectors, students and young professionals were encouraged to contribute articles and share practical knowledge to strengthen the publication and the wider welding community.

Technology and innovation were also featured during the year, including discussions on laser technology in the shipbuilding industry and emerging areas such as wire arc additive manufacturing, augmented and virtual reality training, machine vision, artificial intelligence and sustainability-related applications. SWS also organised well-received talks and webinars on laser welding, duplex stainless steel welding, EN 1090, digital radiography and national welding capability development.

Membership engagement continued to be a priority. As of 26 April 2026, SWS had 324 members, comprising 172 corporate members, 140 full members, 10 fellows, 1 associate member



and 1 student member. The Society’s Members’ Night held on 17 April 2026 also recognised long-serving corporate members with Distinguished Corporate Member Awards for 25 years or more of continuous affiliation with SWS.

Honorary Treasurer Mr Subbiah Krishnan reported that SWS remained financially healthy. Members raised constructive feedback on the level of financial details presented, and the Council confirmed that more detailed financial information would be considered for future AGMs.

For the 2026–2028 Council term, nine eligible nominations were received for ten available seats, and no ballot was required. The elected Council members were Prof John Pang Hock Lye, Mr Khoo Kok Leong, Mr Lim Zhi Yang, Mr Perianan Radhakrishnan, Mr Suggu Ravi Chandra Reddy, Dr Sun Zheng, Mr Bong Khong Lee, Mr Goh Chong Min and Mr Ong Beng Tiong. Appreciation was also recorded to outgoing Council member Mr William Chong Jun Hua for his service and contributions.

The 48th AGM concluded with thanks to members for their participation, feedback and continued support. As SWS looks ahead to the 2028 IIW International Congress and the continued advancement of welding education, technology and standards, members are encouraged to stay actively involved and contribute to the next chapter of Singapore’s welding journey.

SWS MEMBERS' NIGHT 2026: CELEBRATING FELLOWSHIP, RECOGNITION AND A TOUCH OF MAGIC

The Singapore Welding Society's Members' Night 2026 was held on Friday, 17 April 2026, at the Carnation Room, The Chevrans, bringing together members, corporate partners and friends of the welding community for an evening of appreciation, networking and fellowship. Held from 6:30 pm to 9:30 pm, the event provided a welcome opportunity for members to step away from their busy work schedules and reconnect with one another in a relaxed and enjoyable setting.

Members' Night has always been more than a social gathering. It is a reminder that SWS is built not only on technical knowledge, standards, training and certification, but also on the people and organisations that continue to support the welding profession in Singapore. This year's event carried that spirit strongly. From the warm welcome by emcee Goh Chon Min to the President's message delivered by Prof. John Pang Hock Lye, the evening highlighted a simple but important message: the future of SWS depends on members who continue to step forward, contribute and take an active interest in the Society's work.

The programme was carefully planned to balance formal recognition with fellowship and entertainment. Guests were welcomed into a convivial atmosphere with a networking buffet, free-flow wine and beer, and ample opportunity to meet colleagues, industry peers and long-time friends. For newer members, the evening offered a useful platform to engage with experienced professionals from the welding, inspection, fabrication, oil and gas, marine, construction and testing sectors. For long-standing members, it



was a chance to renew familiar bonds and reflect on the Society's continuing journey.

One of the most meaningful highlights of the evening was the presentation of the Distinguished Corporate Member Awards. These awards recognise corporate members that have maintained their affiliation with SWS for 25 years or more. Their long-standing support has played an important part in sustaining the Society's activities

and strengthening the welding community in Singapore.

The 2026 Distinguished Corporate Member Award recipients included Hiap Seng Engineering Ltd, PEC Pte Ltd, Kobelco Welding Asia Pacific Pte Ltd, UTOC Engineering Pte Ltd, SGS Testing & Control Services Singapore Pte Ltd, Aster Chemicals & Energy Pte Ltd, ESAB Asia/Pacific Pte Ltd, MTQ Engineering Pte Ltd, Singapore Takada Industries Pte Ltd, and Singapore Refining Company Private Limited. The recognition of these organisations was a fitting acknowledgement of their contribution to the industry and their continued commitment to SWS.

Beyond the awards, the evening also carried an important call to action. Members were encouraged to support the Society by volunteering in various capacities and by taking an active role in the upcoming Annual General Meeting in May. This message was timely and relevant. As SWS continues to expand its work in training, certification, technical talks, international affairs, publications and industry engagement, the contribution of members remains vital. The Society can only remain strong when its members participate, share expertise and help shape its future direction.

Adding a lively and memorable element to the evening was the magic performance by Kai Emmanuel. The roving and interactive stage magic brought laughter, surprise and energy to the room, creating moments of shared enjoyment among guests. It was an excellent reminder that professional networking does not always need to be formal all the time; sometimes, the most memorable conversations begin with a smile, a shared experience and a little magic.

SWS Members' Night 2026 successfully blended recognition, fellowship and entertainment. It celebrated the organisations that have stood by the Society for decades, welcomed members into meaningful conversation, and reminded everyone present that SWS is, above all, a community. As Singapore's welding industry continues to evolve with new technologies, standards and skills requirements, the strength of this community will remain essential.

The evening closed on a positive note, with members leaving not only with fond memories but also with a renewed appreciation of the value of belonging to SWS. Members' Night 2026 was a celebration of people, partnership and purpose — and a reminder that the Society's future will continue to be shaped by those who contribute, participate and believe in advancing welding excellence in Singapore.



COMBUSTIBLE DUST

A COMBUSTIBLE DUST EXPLOSION CAN BE STRONGER THAN TNT!

Combustible dust explosions are catastrophic events caused by the rapid ignition and combustion of small solid particles in the air.

A combination of certain conditions causes these explosions, and knowing them is crucial for prevention.

**ON 24 FEB
2021,**

REAL INCIDENT

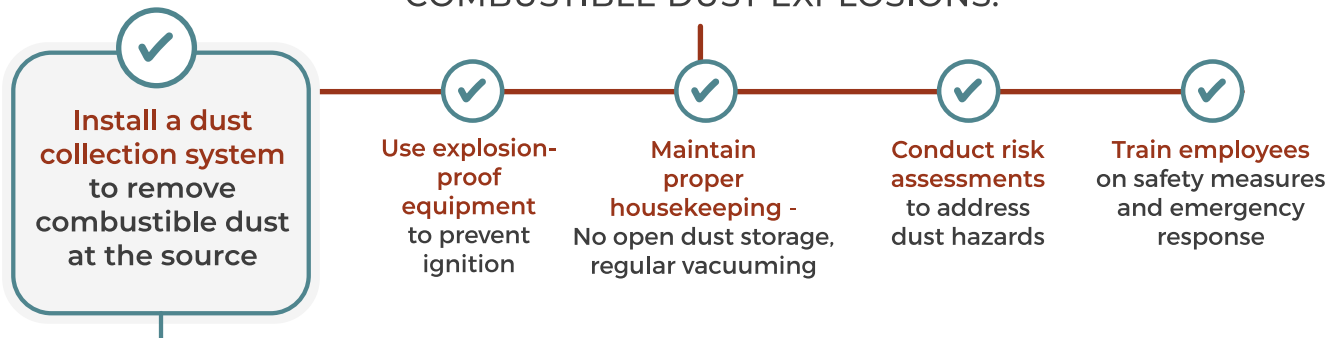
A dust explosion in Tuas,
Singapore, killed 3 workers.

**FROM 1 JAN
2025,**

NEW SAFETY REGULATIONS

Stricter workplace safety rules will
apply to combustible dust hazards.

PREVENTING COMBUSTIBLE DUST EXPLOSIONS:



A dust collection system is the first line of defense against dust explosions!

Nederman
IMPROVING YOUR WORKSPACE

FMZ FILTERS

Designed for dust collection

-  Explosion-protected dust collectors to prevent catastrophic incidents
-  Integrated safety features, including explosions isolation valves
-  IIoT- enabled monitoring for real-time status updates

ACT NOW! PROTECT YOUR WORKPLACE FROM EXPLOSIONS

Contact us today to learn more about Nederman FMZ dust collection solutions!

